

# EHA-RPT

## 1 TO 2 HD-SDI REPEATER



## User's Manual



Copyright © EverFocus Electronics Corp,

Release: **Mar. 2011**

Please read this manual first for correct installation and operation. This manual should be retained for future reference. The information in this manual was current when published. The manufacturer reserves the right to revise and improve its products. All specifications are therefore subject to change without notice.

**PRECAUTIONS**

1. Do not install the EHA-RPT near electric or magnetic fields.  
Install the EHA-RPT away from TV/radio transmitters, magnets, electric motors, transformers and audio speakers since the electromagnetic fields generated from these devices may distort the video image.
2. Never disassemble the EHA-RPT beyond the recommendations in this manual nor introduce materials other than those recommended herein.  
Improper disassembly or introduction of corrosive materials may result in equipment failure or other damage.
3. Keep the power cord away from water and other liquids and never touch the power cord with wet hands.  
Touching a wet power cord with hands or touching the power cord with wet hands may result in electric shock.
4. Never install the EHA-RPT in areas exposed to water, oil or gas.  
Water, oil or gas may result in equipment failure, electric shock or, in extreme cases, fire.
5. Do not operate the camera beyond the specified temperature, humidity or power source ratings.  
Use the camera at temperatures within 0°C ~ 50°C (32°F~122°F) and humidity between 20~80%. The input power source is 12VDC.

## 1. INTRODUCTION

The EHA-RPT splits one high definition digital video signal in HD-SDI standard into two streams for presentation on HDTV or HDMI monitors. It supports HD-SDI video signals compliant with SMPTE 292M, 296M standards, at data rates up to 1.485Gb/s. With integrated cable equalizer technology, the EHA-RPT is capable of processing HD-SDI digital video at up to 1920 x 1080 resolution over 75  $\Omega$  coaxial cable. This provides a complete solution for the transmission and rendering of both interlaced and progressive scan HD-SDI digital video from coaxial cable-based HD-CCTV systems.

## 2. FEATURES

- Supports high-definition HD-SDI digital video at 720p60, 1080i60 and 1080p30 formats at all frame rates
- HD-SDI standard SMPTE292M, 296M at 1.485Gb/s data rate
- Integrated cable equalizer for long distance video transmission without loss of quality
- Capable of receiving HD-CCTV digital video over 75 $\Omega$  coaxial cable at distances over 100M ( depending on cable type )
- High quality digital video and audio transmission with near zero latency



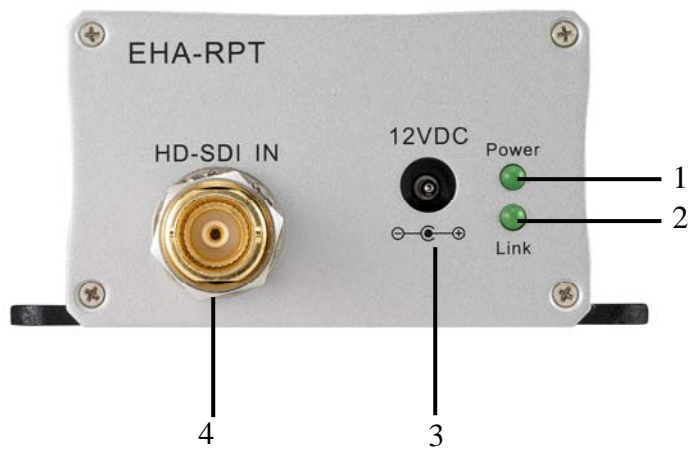
### 3. SPECIFICATIONS

Model Name	EHA-RPT 1 to 2 HD-SDI Repeater
Technical	
SDI standards	HD-SDI
Video bandwidth	1.485Gbps
Video support	720p @50/59.94/60Hz, 1080i @50/59.94/60Hz, 1080p @25/30Hz
Input signal	HD-SDI: SMPTE 292M / 296M
Output signal	HD-SDI: SMPTE 292M / 296M
Input Connector	1 x BNC [HD-SDI] 3G 75Ω inter-locked socket
Output Connector	2 x BNC [HD-SDI] 3G 75Ω inter-locked socket
Mechanical	
Housing	Metal case
Dimensions	77.4 (W) x 38.4 (H) x 146.2 (D) mm / 3" (W) x 1.5" (H) x 5.8" (D)
Weight	200g / 0.45lbs
Power supply	12VDC
Power consumption	3 W max.
Operation temperature	0~50°C / 32~122°F
Relative humidity	(20%~80% Humidity)

### 4. PACKAGE CONTENTS

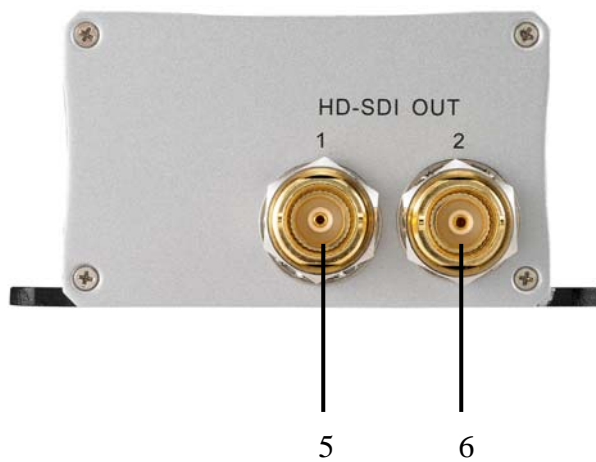
- EHA-RPT 1 to 2 HD-SDI Repeater (x1)
- Accessory packet (x1)
- Power adaptor (x1)
- Printed Installation Guide (x1)

## 5. FRONT PANEL



1. Power LED indicator
2. Link LED indicator
3. Power 12VDC
4. HD-SDI Input

## 6. REAR PANEL



5. HD-SDI Output 1
6. HD-SDI Output 2

## 7. CABLE REQUIREMENTS FOR BNC CONNECTOR

### 7.1 Cable Types

The EHA-RPT allows a total signal attenuation of up to 43.5 dB along the cable between devices. The actual maximum cable length depends on the attenuation characteristic of the particular cable used. Generally speaking, the better the cable quality, the lower the signal attenuation, thus the longer the distance the HD-CCTV video signal can be carried.

The following table gives examples of different cable types, losses and the distances that can be achieved. These are only examples and the actual distance is determined by the attenuation characteristic of the cable in your application.

The table below gives an orientation for achievable cable distances:

Cable Type	Attenuation in dB at 1 GHz per 100 m / 328 ft	Max. Cable distance in	
		m	ft
RG-59	24 ~ 40 *	70 ~ 160	230~520
RG-6	15 ~ 35 *	100 ~ 190	330~620
RG-11, CATV-lowloss cables	8 ~ 16 *	180 ~< 250	590~<820

\* Low quality cable may have higher attenuation

### 7.2 Cable Installation

Please make sure, that the coaxial cable is not squeezed at any position.

Also the max. bending radius defined by the cable manufacturer should be considered.

General rule: maximum bending radius = 10 x outer cable diameter

Bending creates pressure on the center conductor, causing it to move through the dielectric toward the inside of the bend. This affects impedance and return loss and reduces the maximum possible cable length.

Please try to avoid any BNC - adapter or any connectors in the BNC cable.

Looping HD-SDI signals by BNC T-connectors to other devices is not possible.

### **7.3 BNC-plug**

Also the BNC - plug plays an important role for clear HD-CCTV signal transmission.

Standard BNC plugs for CCTV have a quite high attenuation and may cause return losses due to reflection effects.

We recommend using of HD-Video approved BNC plugs.

## *EverFocus Electronics Corp.*

**EverFocus Taiwan:**

12F, No.79, Sec. 1, Shin-Tai Wu Road, Hsi-Chih,  
Taipei, Taiwan

TEL: +886 2 2698 2334

FAX: +886 2 2698 2380

[www.everfocus.com.tw](http://www.everfocus.com.tw)

[marketing@everfocus.com.tw](mailto:marketing@everfocus.com.tw)

**EverFocus China - Beijing:**

Room 609, Technology Trade Building,  
Shangdi Information Industry Base,  
Haidian District, Beijing 100085, China

TEL: +86 10 6297 3336~39

FAX: +86 10 6297 1423

[www.everfocus.com.cn](http://www.everfocus.com.cn)

[marketing@everfocus.com.cn](mailto:marketing@everfocus.com.cn)

**EverFocus USA - California:**

1801 Highland Avenue, Unit A, Duarte, CA  
91010, USA

TEL: +1 626 844 8888

FAX: +1 626 844 8838

[www.everfocus.com](http://www.everfocus.com)

[sales@everfocus.com](mailto:sales@everfocus.com)

**EverFocus Japan:**

5F, Kinshicho City Building, 2-13-4  
Koto-Bashi, Sumida-Ku, Tokyo, 130-0022, Japan

TEL: +81 3 5625 8188

FAX: +81 3 5625 8189

[www.everfocus.co.jp](http://www.everfocus.co.jp)

[info@everfocus.co.jp](mailto:info@everfocus.co.jp)

**EverFocus India:**

Suite 803, Housefin Bhavan, C-21, Bandra Kurla  
Complex, Bandra (East), Mumbai 400051, India

TEL: +91 22 6128 8700

FAX: +91 22 6128 8705

[www.everfocus.in](http://www.everfocus.in)

[sales@everfocus.in](mailto:sales@everfocus.in)

**EverFocus Europe - Germany:**

Albert-Einstein-Strasse 1, D-46446 Emmerich,  
Germany

TEL: +49 2822 93940

FAX: +49 2822 939495

[www.everfocus.de](http://www.everfocus.de)

[info@everfocus.de](mailto:info@everfocus.de)

**EverFocus China - Shenzhen:**

4F, No. 2, D4 Building, Wan Yelong  
Industrial Park, Tangtou Road, Shiyan,  
Baoan, Shenzhen, Guangdong 518101, China

TEL: +86 755 2765 1313

FAX: +86 755 2765 0337

[www.everfocus.com.cn](http://www.everfocus.com.cn)

[marketing@everfocus.com.cn](mailto:marketing@everfocus.com.cn)

**EverFocus USA - New York:**

415 Oser Avenue, Unit S, Hauppauge, NY 11788, USA

TEL: +1 631 436 5070

FAX: +1 631 436 5027

[www.everfocus.com](http://www.everfocus.com)

[sales@everfocus.com](mailto:sales@everfocus.com)

**EverFocus Europe - UK:**

Unit 12, Spitfire Business Park,  
Hawker Road, Croydon Surrey, CR0 4WD, UK

TEL: +44 20 8649 9757 / +44 845 430 9999

FAX: +44 20 8649 9907

[www.everfocusuk.co.uk](http://www.everfocusuk.co.uk)

[salesuk@everfocus.com](mailto:salesuk@everfocus.com)



Your EverFocus product is designed and manufactured with high quality materials and components which can be recycled and reused. This symbol means that electrical and electronic equipment, at their end-of-life, should be disposed of separately from your household waste. Please, dispose of this equipment at your local community waste collection/recycling centre. In the European Union there are separate collection systems for used electrical and electronic product. Please, help us to conserve the environment we live in!

Ihr EverFocus Produkt wurde entwickelt und hergestellt mit qualitativ hochwertigen Materialien und Komponenten, die recycelt und wieder verwendet werden können. Dieses Symbol bedeutet, dass elektrische und elektronische Geräte am Ende ihrer Nutzungsdauer vom Hausmüll getrennt entsorgt werden sollen. Bitte entsorgen Sie dieses Gerät bei Ihrer örtlichen kommunalen Sammelstelle oder im Recycling Centre. Helfen Sie uns bitte, die Umwelt zu erhalten, in der wir leben!



P/N: 4605X1EHAR001AR\_Ver.A